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#### ABSTRACT

IDENTIFIERS

This paper provides a brief overview of Oakton Community College's (OCC) cluster organization, which is believed to foster offering of true interdisciplinary education. OCC is organized into four learning clusters, each of 30 full-time and 40 part-time faculty, 1,500 students, and headed by a dean. Each cluster is semi-autonomous; authority is decentralized, faculty/student participation is emphasized, and a humanistic learning environment is encouraged. In the fall of 1973, OCC offered its first Natural Science/Social Science tandem course, an integrated learning approach whereby two instructors in separate disciplines were brought together as an alternative to traditional programs. More complex efforts have followed. A course entitled "1984" was inaugurated in the fall of 1974 as an extension of the tandem approach. Social Science, Natural Science, and Geography were combined into a course meeting 11 hours per week, with the goal of examining a number of elements of contemporary society from biological, sociological, and geographical perspectives. The systems approach is used to present a variety of topics. Evaluation of students is accomplished through examinations and a term project integrating the three disciplines. Student evaluation of faculty is an integral part of the evaluative process. Although time and energy demands are increased, the OCC staff believes in the interdisciplinary approach. (Author/JDS)

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# INTERDISCIPLINARY EDUCATION IN A CLUSTER COLLEGE

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### Introduction

Oakton Community College (OCC) is a relatively young institution located in a suburb north of Chicago: When the college opened its doors to the community six years ago, the philosophy was and still remains that Oakton should provide opportunities for facilitating learning; the emphasis should not be only on the "what" of learning - content - but also on the "how" of learning.

Traditionally, colleges and universities have been organized into department/division categories; these units generally have been more involved in emphasizing or improving the "what" - content of learning, but because of self-imposing restrictions have not been able to concentrate on developing the necessary integration of all disciplines. At Oakton, we believe that knowledge and learning is truly interdisciplinary; it is important to mention then the structural features of the college because it is this unique structure which we believe fosters the offering of a true interdisciplinary education.

There are no departments or divisions; the college is organized into four learning clusters. In each cluster are approximately thirty full-time faculty, forty part-time faculty, and 1500 students. Each cluster then constitutes a mini-college within the total college. Faculty from all disciplines are divided heterogeneously among four different clusters. At Oakton, when faculty are employed, the tacit assumption is made that they are competent in their knowledge of the discipline, but may not always be able to teach it effectively. The college is dedicated to providing learning environments not only for students, but for instructors; a scientist, an accounting instructor, and a counselor all have one common concern: effective teaching. Cluster meetings, held bimonthly, are primarily intended for faculty to discuss ideas, theories, methodologies, successes and failures, all within a supportive environment.

Faculty are encouraged to experiment; to be innovative where innovation can be successful. Instructors in each cluster may work together with students in attempting to devise instructional methods best suited to the individual student's learning mode.

Students, at the time of registration, are assigned to learning clusters; their assignment is based upon several factors, one of which is a preference for curricular interest.

Each cluster is semi-autonomous in the sense that it has its own budget, staff, faculty (including counselors) and students. The administrator of the learning cluster is a Dean; at Oakton, the Cluster Dean is a composite of the various traditional deans. He is a Dean of Faculty, Dean of Students, and a Dean of Transfer/Career Programs.



Cluster Deans are the key administrators in an interdisciplinary learning system where authority is decentralized. Faculty/student participation emphasized, and a humanistic learning climate encouraged. The Deans are committed to supporting faculty innovation.

Because of this type of commitment, the Deans have encouraged and fostered much innovation in the area of improving science education. We have been offering several variations of team-taught courses; these courses have the advantage of presenting different viewpoints, approaches, personalities and ranges of expertise. Thus the dangers of tunnel vision can be avoided and the student exposed to a broader experience of education.

## Interdisciplinary Offerings

During the Fall Semester 1973 Oakton offered its first Natural Science/Social Science tandem course. As we at Oakton view it, a tandem course is an integrated learning approach whereby two instructors in two distinct, separate disciplines bring their teaching expertise together in order to offer students a viable alternative to the more traditional instructional programs. When taught separately, the Natural Science course stresses the importance of inheritance, health, disease and the role that the environment interacts with all of these. The Social Science course, specifically entitled "Social Problems," investigates social change and disorganization, juvenile delinquency, crime, prejudice. The tandem, then, integrated these separate courses. Thus a learning experience was created which explored a broadly defined subject area through the perspectives of two instructors from two disciplines. The tandem offered credit in each of the two subjects and was constructed to take the student beyond the more limited approaches of courses that are taught separately.

The philosophical basis for interdisciplinary education which motivated this tandem and others similar to it has also inspired more complex packaging of courses. In an effort to provide a more complete interdisciplinary educational experience, a program entitled "1984" was inaugurated in the Fall Semester of 1974. This program was rerun in Fall of 1975 and is planned again for the Fall Semester of 1976. Basically, the 1984 program is an extension of the Social Science - Natural Science Tandem discussed above; to the tandem was added a Geography course.

The geography course, "Introduction to Geography," is a topical approach to the discipline and emphasizes the nature and distribution of various geographic phenomena and the relationships of the natural environment on human distributions and activities. When taught as a triad, these three ordinarily separate courses become integrated into a coherent whole, with the goal of examining a number of elements of our contemporary society from the biological, sociological, and geographical perspectives.



To pursue the goals and objectives of the program as a whole, as well as meeting the minimal content areas of the three individual courses, the triad is presented in five rather large, interrelated units of study. These units include the following: I. Society's Environmental Needs; II. Inheritance, Race, and Demography; III. Crime, Poverty, and Spatial Interaction; IV. Disease, Drugs, and Personal Health; and V. Cultural Aspects of Sex, Reproduction and the Family. The program is a single semester in length, meets for eleven class hours per week, and offers to the student, ten semester hours of transfer credit. In the scheduling of classes, two days a week have seventyfive minute periods, two days a week, one-hundred minute periods, and on the final day a two-hundred minute period. The large blocks of time allow sufficient latitude for special presentations such as full length films, guest speakers, laboratories, and field trips. The scheduling also allows a great amount of flexibility in the presentation of course materials as one instructor may use several consecutive periods of time for the presentation of fundamental materials which the other instructors may then use as a foundation for their respective presentation. The scheduling also allows one instructor to present additional materials in some units in which a colleague may not have a full complement of material on the given topic. For example, the biologist has less material in the unit on Crime, while the geographer has an abundance of material to present in this area. In the final unit on Sex, Reproduction and the Family, the reverse situation exists.

In presenting the five units of material, two themes are used to interrelate the subject material from the three disciplines. The influence of the natural environment on the social and biologic conditions of humankind is continually stressed throughout the course. The term environment acquires a variety of meanings and scales as the course evolves. In the first unit dealing with Society's Environmental Needs, several fundamental biotic and abiotic characteristics of the Earth environment as the home of humankind are presented. The presentation sets the stage for most subsequent discussions, especially those which consider the spatial distributions of various social and biological phenomena across the face of the earth. The significance and meaning of the socio-cultural environment is also developed in the program at an early stage and its relationship to the physical and biological environment of the earth is continually stressed. The analysis of the cultural environments ultimately leads to an examination of the artificial environment of the city. The college itself is situated in such a metropolitan environment and readily finds itself in a position to examine firsthand many problems facing the contemporary urbanized America.

A second unifying theme of the program is that of the systems approach which is used to present a variety of topics ranging from the vastness of the Earth-Sun energy system as it acts to create the home of humankind to the minute complexities of the human reproduction system. A system, as defined in the program, is a collection of entities working together. For purposes of examination, boundaries are placed on most of the systems giving



a "Blackbox" where the inputs of the system interact to produce storage or an output. The relationships of this approach to the study of the human body are obvious; however, the approach is also used to study urban unrest by the sociologist.

Being located in suburban Chicago, the immediate metropolitan area is used extensively for field experiences and as a source of numerous guest speakers. In the first unit of material dealing with the environment, the relationship of the industrialized society with a natural region is vividly shown by a weekend camping field trip into the Indiana Dunes region and a tour of a large steel mill in the immediate vicinity of the dunes. In order to gain a better perspective of the situation of the Blacks in a midwestern metropolitan area, an all day field encounter is arranged through various neighborhoods of the South Side of Chicago. After reading Gerrald Suttles' The Social Order of the Slum, a book dealing with an integrated neighborhood on the near west side of Chicago threatened by extensive urban redevelopment. a field experience is arranged for the students to visit the area and meet with various representatives of the community. In order to show the students the large scale production of ethical drugs, a tour of a large pharmaceutical firm in the area is taken. Guest speakers have included such diverse individuals as an alcoholic, a clinical psychologist, a government official in charge of an advisory committee on energy, members of the Chicago Gay community and an instructor of the Lamaze Birth Technique.

## <u>Outcomes</u>

The evaluation of the student's performance in the program is accomplished through a number of processes, two of which being a series of objective/ subjective examinations and a term project. In all forms of evaluation, the student is asked questions which integrate the three disciplines, and in their responses, the student is expected to also integrate the subject material. The topic and mode of presentation of the student's project is of his/her own choice. The major requirement of the project is that it must integrate the three disciplines into a unified whole. As the topic is open to the student's personal interests, and the mode of presentation may be of any form, many students have found that they could use the same project, via mutual agreement between the instructors involved, with that required of another class; e.g. a student was able to use the project for term paper in his writing class; another student produced a film which she could use in a humanities course. In general, the student's projects have been far above the level normally expected from college freshmen and sophomores. Interest generated by some of the projects has been so strong that the individuals have decided to major in areas to which they were first introduced via the project. For example, one student, in pursuing a project examining the effects of the construction of a proposed crosstown expressway in Chicago, has decided to major in urban planning at one of the Chicago universities.



### Evaluation

At Oakton Community College, student evaluation of faculty is an integral part of our evaluative process. Both times that the 1984 program had been offered to students, questionnaires were submitted to them asking for anonymous responses to items dealing with integration of the curriculum, compatibility of stated objectives versus actual objectives, availability of instructors, practicality of assignments, laboratory experiments, and field trips. In addition to these written responses, the Learning Cluster Dear has attended many of these classes and, with the instructors absent from the class, has talked with the students to find what their perceptions of the program has been. Generally speaking, the outcomes have been extremely favorable. The students have asked for additional courses to be taught in succeeding semesters. One of the problems, that the administration here as well as in other institutions faces, is the economic cost of such a program. This program required much additional time and energy by the instructors, both in the planning stage and in the actual teaching of the classes. Normally, the three instructors were in the classroom for a minimum of ten hours a week. The normal teaching load at Oakton is fifteen lecture hour equivalents per semester.

Each cluster has been assigned fifteen hours of alternate or released time per year. Usually the Dean, in consultation with members of the cluster, can award this alternate time to faculty members for participation in special projects or innovative programs such as the 1984 offering. When this program was run, each instructor was given one alternate time, or more succinctly, released from one teaching section in order to participate in the program.

Based on the faculty's own comments and perceptions, one section of alternate time is not equivalent to the additional amount of work necessary in order to produce a program of this nature. However, the faculty have a commitment that such interdisciplinary programs are worthwhile doing; and given the additional work load involved in such a course, the benefits of learning and teaching together make the venture extremely profitable. It's through the open doors of communication between faculty of different disciplines that real and not virtual interdisciplinary education can occur. The staff at Oakton Community College also believes that the cluster concept as it is currently designed allows and encourages such viable programs.

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